

*112*  
*Cond.*  
including at least one [two] semiconducting [layers, each layer] comprising  
[constituting essentially] an equipotential surface and also including solid insulation  
layer [disposed therebetween].

2 (Amended), line 1, delete "characterized in";

Line 2, delete "that" and insert --wherein--.

*Sub B3*  
3. (Amended) A plant as claimed in [claims] claim 1 [or 2], [characterized in  
that] wherein the insulation is built up of a cable [(6)] intended for high voltage and  
comprising at least one [or more] current-carrying conductor[s (31)] surrounded by at  
least one semiconducting layer [(32, 34)] with intermediate insulating layer [(33)] of  
solid insulation.

4. (Amended) A plant as claimed in claim 3, [characterized in that] wherein an  
[the] innermost semiconducting layer [(32)] is at substantially the same potential as  
the conductor[(s) (31)].

*112*  
*substructure*

5. (Amended) A plant as claimed in [either of claims] claim 3 [or 5],  
[characterized in that] wherein the equipotential surface comprises at least one layer  
surrounding the insulating layer having semiconducting properties [one of the outer  
semiconducting layers (34) is arranged to form essentially an equipotential surface  
surrounding the conductor(s) (31)].

*Sub B4*  
*which layer is connected to a selected potential*  
6. (Amended) A plant as claimed in claim 5, [characterized in that] said at  
least one layer comprising an outer semiconducting layer [(34) is] connected to a  
selected potential.

7 (Amended), line 1, delete "characterized in";

Line 2, delete "that" and insert --wherein--.

Sub B5 112 which layer  
8. (Amended) A plant as claimed in [any of claims 3-7, characterized in that] claim 3, wherein at least two of said layers have substantially the same coefficient of thermal expansion.

9. (Amended) A plant as claimed in [any of claims 3-5, characterized in that] claim 3, wherein the current carrying conductor comprises a plurality of strands, only a few of the strands being uninsulated from each other.

23  
10. (Amended) A plant as claimed in [any of claims 1-9, characterized in that] claim 1, wherein the winding comprises [consists of] a cable comprising one or more current-carrying conductors [(2)], each conductor [consisting of] including a number of strands, an inner semiconducting layer [(3)] being arranged around each conductor, an insulating layer [(4)] of solid insulation being arranged around [each] the inner semiconducting layer [(3)] and an outer semiconducting layer [(5)] being arranged around [each] the insulating layer [(4)].

11 (Amended), line 1, delete "characterized in";

Line 2, delete "that" and insert --wherein--; delete "also".

Sub B6 A4  
12. (Amended) A plant as claimed in [any of the preceding claims, characterized in that] claim 1, wherein the machine has a magnetic circuit including a cooled [is arranged in a rotating electric machine, the] stator [(3) of which is cooled] operative at earth potential.

13. (Amended) A plant as claimed in [any of the preceding claims,  
characterized in that] claim 12, wherein the magnetic circuit of the electric machine  
comprises a stator winding located [placed] in a slot [(5)], said slot [(5) being  
designed as] having a number of cylindrical openings [(7)] running axially and  
radially outside each other, having substantially circular cross section and separated  
by narrow waist parts [(8)] between the cylindrical openings.

14 (Amended), line 1, delete "characterized in";

Line 2, delete "that" and insert --wherein--.

15 (Amended), line 1, delete "characterized in";

Line 2, delete "that" and insert --wherein--.

16 (Amended), line 1, delete "characterized in";

Line 2, delete "that" and insert --wherein--.

17 (Amended), line 1, delete "characterized in";

Line 2, delete "that" and insert --wherein--.

18. (Amended) A plant as claimed in [claims] claim [3 and] 14, [characterized  
in that] wherein the cable [(6) constituting the stator winding] has a gradually  
decreasing insulation seen from the high-voltage side towards the Y-point.

19 (Amended), line 1, delete "characterized in";

Line 2, delete "that" and insert --wherein--.

20. (Amended) A plant as claimed in [claims] claim 13 [and 18],  
[characterized in that] wherein the circular cross section [(7)] of the substantially

Q6  
mid 112  
cylindrical slots [(5)] for the stator winding has decreasing radius seen from the yoke portion towards the rotor.

21. (Amended) A plant as claimed in [any of claims 12-20, characterized in that] claim 12, wherein the rotating part has an inertia and electromotive force.

22 (Amended), line 1, delete "characterized in";

Line 2, delete "that" and insert --wherein--.

23 (Amended), line 1, delete "characterized in";

Line 2, delete "that" and insert --wherein--.

24. (Amended) A plant as claimed in claim 23, [characterized in that] wherein the rotor [(2)] and the stator [(3)] are so dimensioned that at nominal voltage, nominal power factor and over-excited operation, the thermally based current limits of stator and rotor are exceeded approximately simultaneously.

25. (Amended) <sup>The</sup> A plant as claimed in claim 23, [characterized in that] wherein the rotor [(2)] and the stator [(3)] are so dimensioned that at nominal voltage, nominal power factor and over-excited operation, the thermally based stator current limit is exceeded before the thermally based rotor current limit has been exceeded.

26. (Amended) <sup>The</sup> A plant as claimed in [either of claims] claim 24 [or 25], [characterized in that is] wherein it has 100% overload capacity at nominal voltage, nominal power factor and at over-excited operation.

27. (Amended) <sup>The</sup> A plant as claimed in claim 24 wherein [or claim 25, characterized in that] the rotor poles are pronounced.

28 (Amended), line 1, before "claim" insert --in--; delete "characterized in that" and insert --wherein--.

28 Line 1 delete "characterized in that " and insert --wherein--.

29 (Amended), line 1, before "claim" insert --in--; delete "characterized in";

Line 2, delete "that" and insert --wherein--.

30. (Amended) <sup>The</sup> A plant as claimed in [any of claims] claim 3[-29, characterized in that] wherein the cable[s (6)] with solid insulation intended for high voltage have a conductor area of about between 30 and 3000 mm<sup>2</sup> and have an outer cable diameter of about between 20 and 250 mm.

31. (Amended) <sup>The</sup> A plant as claimed in claim 1, comprising [any of the preceding claims, characterized in that the] stator and rotor circuits [(3, 2) are provided with] and cooling means therefor in which the coolant is in liquid and/or gaseous form.

32. (Amended) <sup>The</sup> A plant as claimed in claim 1, wherein [any of the preceding claims characterized in that] the machine is arranged for connection to several different voltage levels.

33. (Amended) <sup>The</sup> A plant as claimed in claim 1, wherein [any of claims 1[-32, [characterized in that] the machine is connected to the power network without any step-up transformer.

34. (Amended) A plant as claimed in claim 1, wherein [any of the preceding claims, characterized in that] the winding of the machine is arranged for self-regulating field control and lacks auxiliary means for control of the field.

35 (Amended), line 3, delete "characterized in that" and insert --wherein--.

37 (Amended), line 2, delete "characterized in";

Line 3, delete "that" and insert --wherein--.

Add the following new claims 39-50:

--39. A synchronous compensator plant including a rotating high voltage electric machine comprising a stator; a rotor and a winding, wherein said winding comprises a cable including at least one current-carrying conductor and a magnetically permeable, electric field confining cover surrounding the conductor, said cable forming at least one uninterrupted turn in the corresponding winding of said machine.

40. The synchronous compensator plant of claim 39, wherein the cover comprises an insulating layer surrounding the conductor and an outer layer surrounding the insulating layer, said outer layer having a conductivity sufficient to establish an equipotential surface around the conductor.

41. The synchronous compensator plant of claim 39, wherein the cover comprises an inner layer surrounding the conductor and being in electrical contact

therewith; an insulating layer surrounding the inner layer and an outer layer surrounding the insulating layer.

42. The synchronous compensator plant of claim 39, wherein the inner and outer layers have semiconducting properties.

43. The synchronous compensator plant of claim 39, wherein the cover is formed of a plurality of layers including an insulating layer and wherein said plurality of layers are substantially void free.

44. The synchronous compensator plant of claim 39, wherein the cover is in electrical contact with the conductor.

45. The synchronous compensator plant of claim 44, wherein the layers of the cover have substantially the same temperature coefficient of expansion.

46. The synchronous compensator plant of claim 39, wherein the machine is operable at 100% overload for two hours.

47. The synchronous compensator plant of claim 39, wherein the cable is operable free of sensible end winding loss.

48. The synchronous compensator plant of claim 39, wherein the winding is operable free of partial discharge and field control.

49. The synchronous compensator plant of claim 39, wherein the winding comprises multiple uninterrupted turns.